

REMARKS

The arguments presented in applicants' response of January 27, 2003, are considered to be correct. The especially valuable salts recited in the added claims are not mentioned at all in the prior art references relied on by the examiner, and thus the previous arguments will be seen to be even more applicable to those claims.


Favorable reconsideration of all of the claims by the examiner is respectfully requested.

A check in the amount of \$300.00 is attached to cover the required second further month extension fee (one month fee of \$110.00 paid with 1/27/03 amendment).

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Add new claims 16 and 17 as follows:

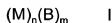
16. (new) The method of claim 1 wherein the mineral salts are selected from the group consisting of Fe, Cr, Co and Mn salts.
17. (new) The method of claim 5 wherein M is a metal cation selected from the group consisting of cations of Fe, Cr, Co and Mn.

COMPLETE LISTING OF ALL CLAIMS IN THE APPLICATION

1. (previously amended) The method of increasing the bioavailability of mineral salts which comprises combining said salts and α -lipoic acid or an α -dihydrolipoic acid.

2. (previously amended) The method of claim 1, wherein at least one mineral salt is combined with α -lipoic acid or α -dihydrolipoic acid.

3. (previously amended) The method of claim 2, wherein the mineral salts have the formula I,



where

M is a monovalent to trivalent physiologically acceptable metal cation,

B is a monovalent to trivalent physiologically acceptable anion,

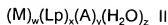
n is 1, 2 or 3 and

m is 1, 2 or 3,

where the subscripts n and m correspond to the valency and charge equalization of the mineral salt of the formula I.

4. (previously amended) The method of claim 1, wherein the combination is metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes.

5. (previously amended) The method of claim 4, wherein the combination is metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes of the formula II,



where

- M is a monovalent to trivalent physiologically acceptable metal cation or a mixture of monovalent to trivalent physiologically acceptable metal cations,
- Lp is racemic α -lipoic acid or α -dihydrolipoic acid, (R)- or (S)- α -lipoic acid or (R)- or (S)- α -dihydrolipoic acid, racemic α -lipoate or dihydro- α -lipoate or (R)- or (S)- α -lipoate or (R)- or (S)-dihydro- α -lipoate,
- A is a physiologically acceptable monovalent or divalent anion,
- w is 1 or 2
- x is 1, 2, 3 or 4,
- y is 0, 1, 2 or 3 and
- z is 0, 1, 2, 3, 4, 5 or 6,

where the subscripts w, x and y correspond to the valency and charge equalization of the compound of the formula II.

6. (previously amended) The method of claim 1, wherein the α -lipoic acid is R- α -lipoic acid or the α -lipoate is (R)- α -lipoate.

Claims 7-10 canceled.

11. (previously amended) A method of increasing the bioavailability of mineral salts in feedstuff or food supplements which comprises adding to said feedstuff or food supplements an effective amount of the metal α -lipoates, metal

α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.

12. (previously amended) A method of improving cosmetic formulations which comprises adding to said formulations an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.

Claim 13 canceled.

14. (previously amended) A method of improving drugs that are used to treat disorders in which lipoic acid has a therapeutic or prophylactic effect and in which there is a mineral salt deficiency which comprises adding to said drugs an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.
15. (previously amended) A method of improving compositions for treating diabetes, tumors, HIV infections, AIDS, renal insufficiency, malnutrition, protein-energy malnutrition and mineral deficiencies which comprises adding to said compositions an effective amount of the metal α -lipoates, metal α -dihydrolipoates or metal- α -lipoic acid complexes defined in claim 5.
16. (new) The method of claim 1 wherein the mineral salts are selected from the group consisting of Fe, Cr, Co and Mn salts.
17. (new) The method of claim 5 wherein M is a metal cation selected from the group consisting of cations of Fe, Cr, Co and Mn.